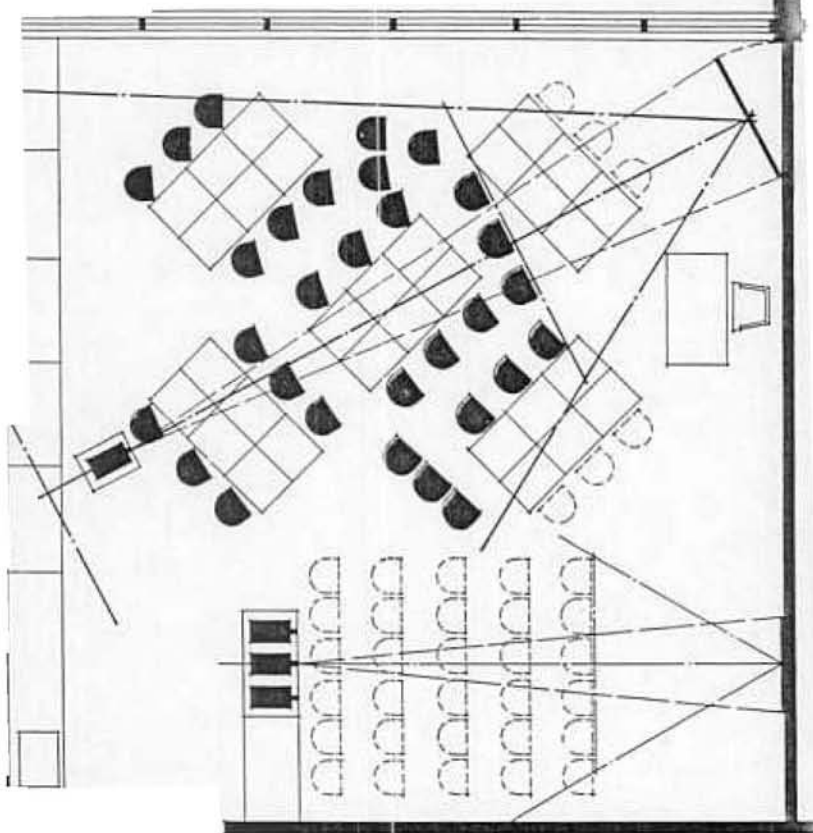


EXAMPLE 4.

THE SQUARE CLASSROOM

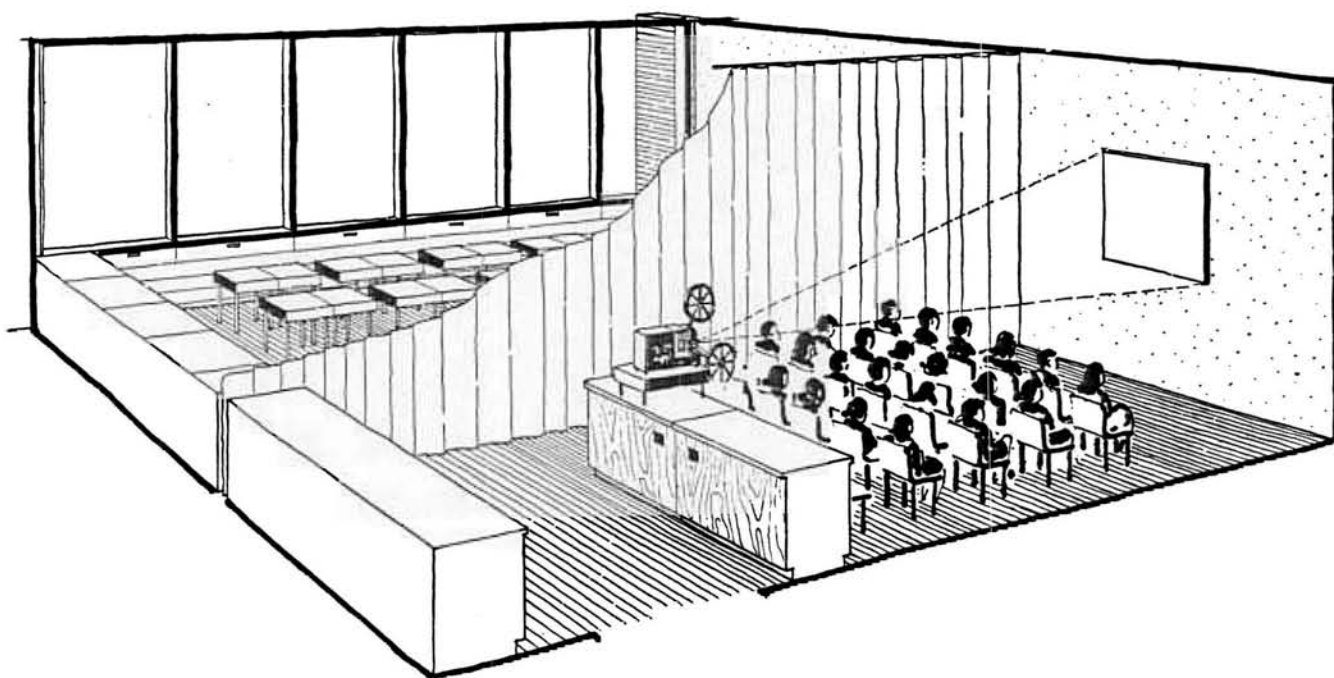


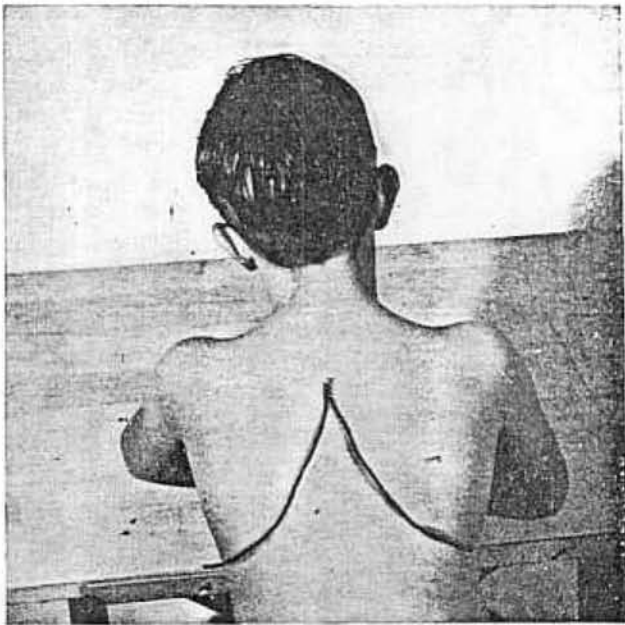
This is a type rapidly spreading eastward from California, where it originated. Code adjustments will soon be made permitting its use in eastern states. It offers a very flexible working area but requires auxiliary sources of light. Again, two solutions:

a. Projection in the main seating area. For this use, the entire room is blacked out, with the same drapes that were suggested for conventional rooms. Six seats are moved by a child while the drapes are being pulled.

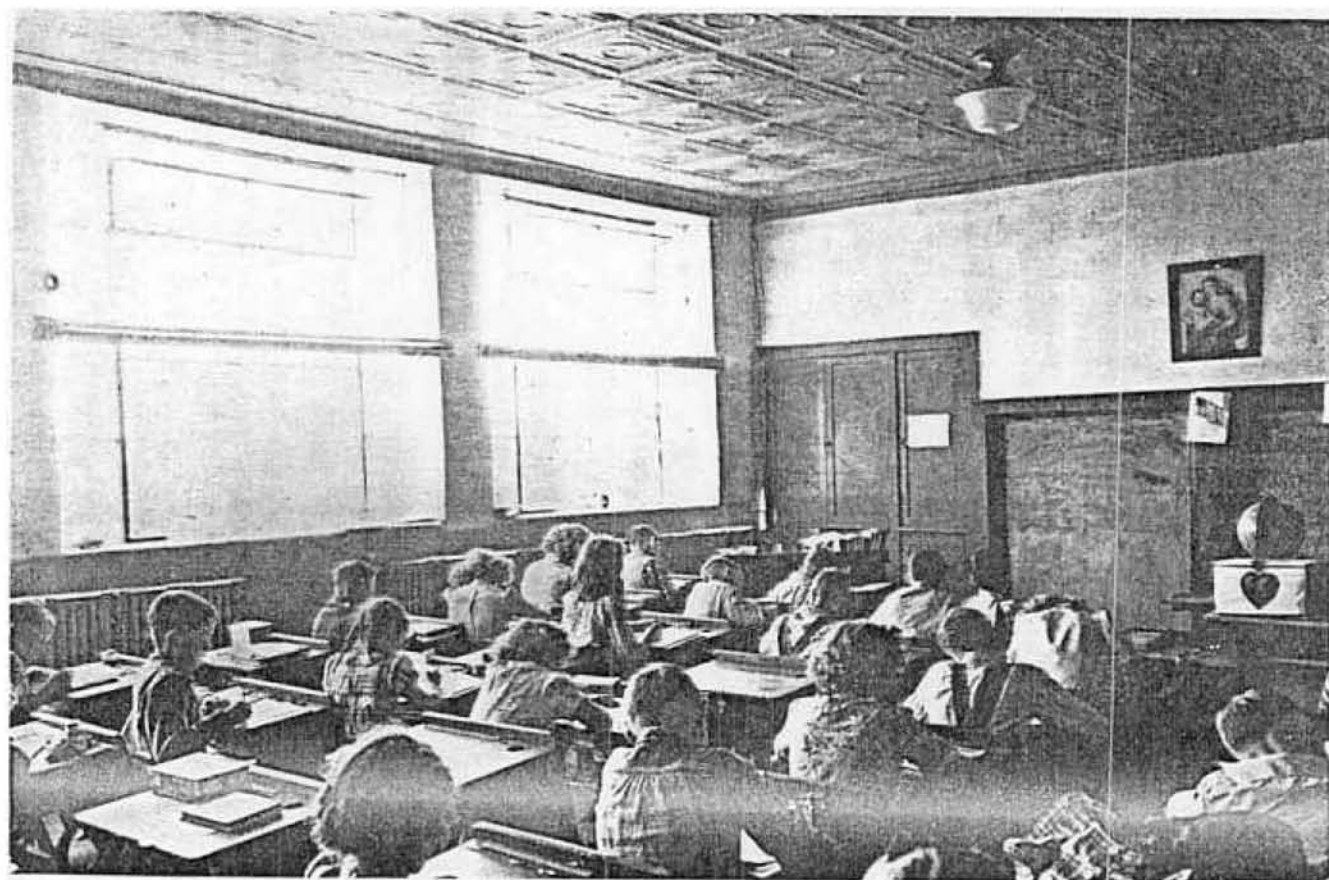
b. Projection in the "project" area. (Dotted lines.) This solution has much to commend it despite the fact that all children must move. One suggestion is that they sit on the floor, depending on the warmth from radiant heating. The work area, or projection area, is blacked out with a drape of its own, which may also be helpful in deadening noise on other occasions.

This is the only scheme in which a fixed stand is recommended, as seen in the perspective below. Underneath is space for storage of films, slides, records.

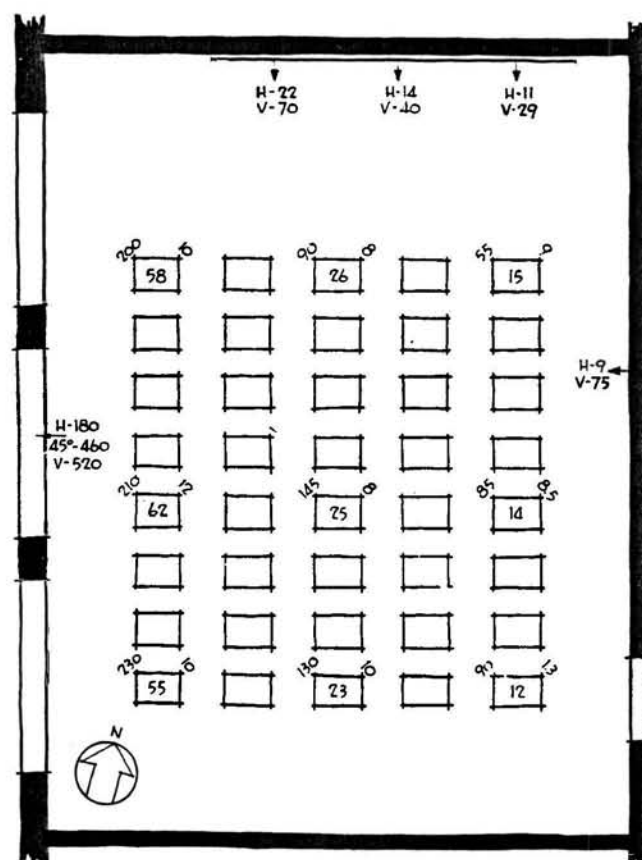




The differences in posture seen above are conditioned entirely by changes in lighting. The pictures were taken in the course of screening 160,000 Texas school children for health, and taking measurements on 40,000 of them. At the left, the boy is seated comfortably at a good working surface in good light. At the right, another unposed view, he has shifted his head, by bodily reflexes, just enough to shade his eyes from the glare of a window to his left. When it is considered that the use of windows at 90° to the left of school seats is absolutely sacred, but leads to such distortion of children's backs, we may judge how completely the daylighting of schools must be rethought. The remedy, page 87



UNCHANGED CLASSROOM, WESTERN ORIENTATION. Similar to Room 200, but with western exposure. Desks at right angles to windows. Colors dim, reflecting a mere fraction of the light. The chart shows footcandle readings. The child at inner rear corner works in one-fifth the light that reaches the best window-row seat. Most distressing are the big figures at left corners of desks. They mean that light falling obliquely on the eye in some positions is 4 times as strong as light on work, creating a major distraction



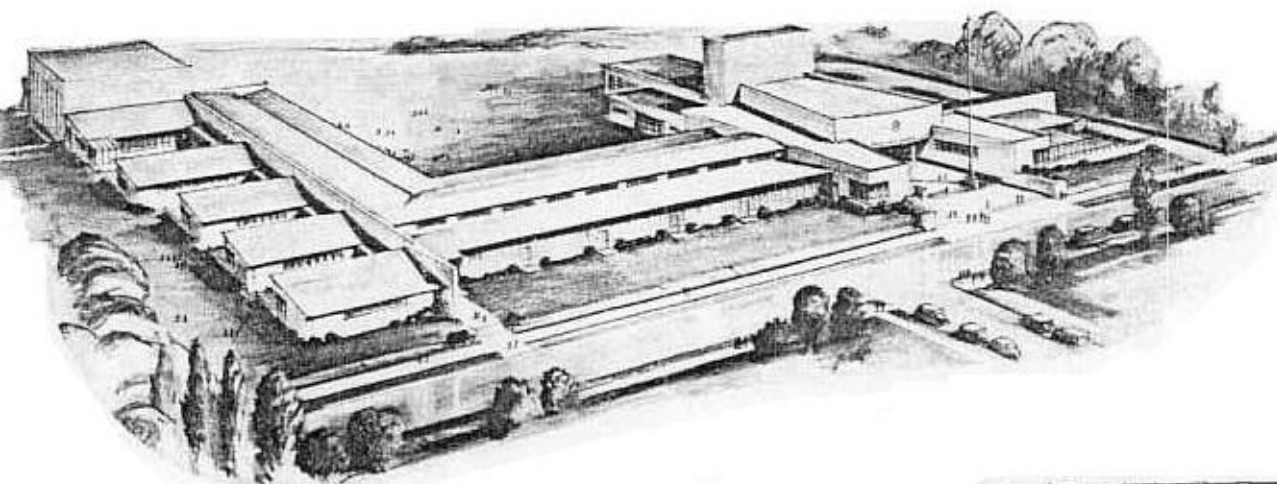
Changed seating was also carried out in all the experimental rooms, in accordance with the diagram seen on the opposite page.

New lighting controls were installed only in rooms 300 and 201. After the room had been repainted and the blackboard area reduced, the windows in Room 300 were equipped with diffusers and baffles as shown on page 88. When covered with a white fabric the diffusers transmitted 60 per cent of the light, and threw a large part of the remainder upward and across the ceiling from which it was reflected downward again onto the children's tasks and onto surfaces in their visual fields.

In Room 201 structural changes were made as shown in the photographs and drawings on page 90. A panel of functional glass block was built in, above a strip of clear glass windows providing for view and ventilation; this vision strip was shielded from sun and sky glare by a small built-in metal hood.

How much improvement was effected?

After changes had been made, all four classrooms were tested with light meters on the same day, under a uniformly overcast sky. The readings are shown in the accompanying diagrams, in which the initials "FL" refer to "foot lamberts." This is the unit of brightness,

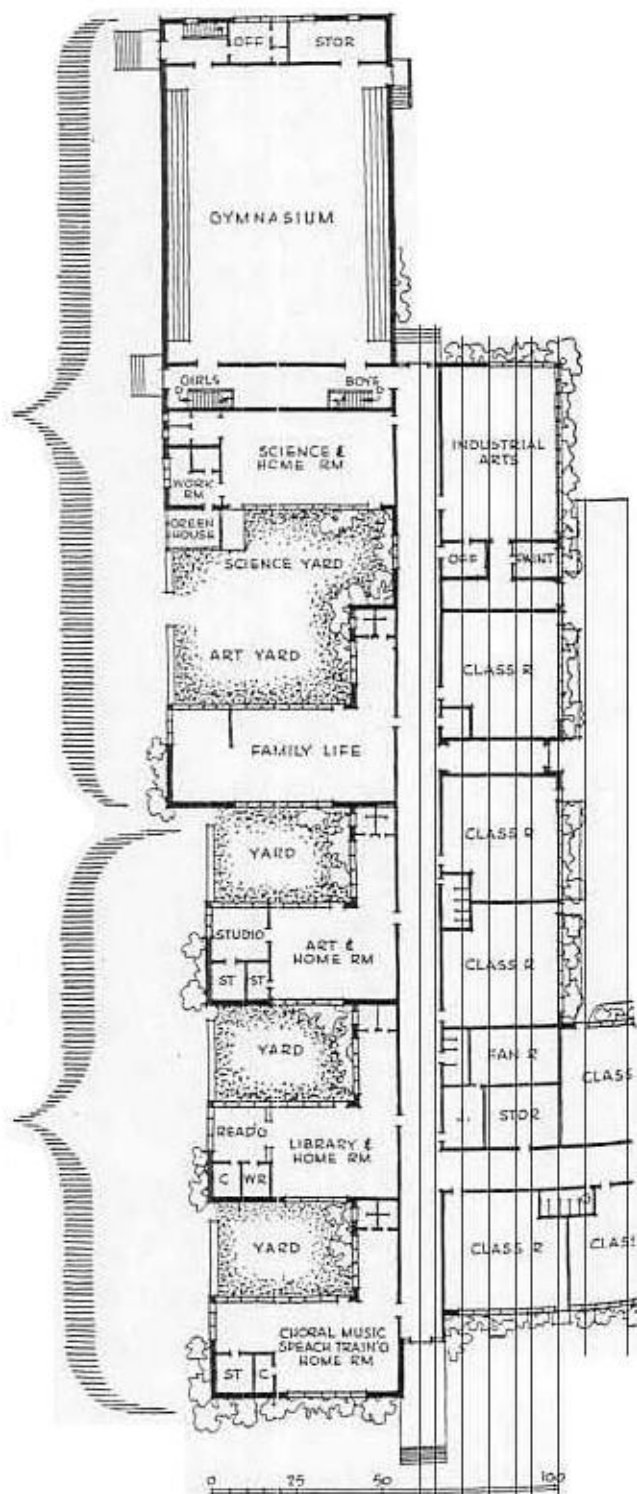


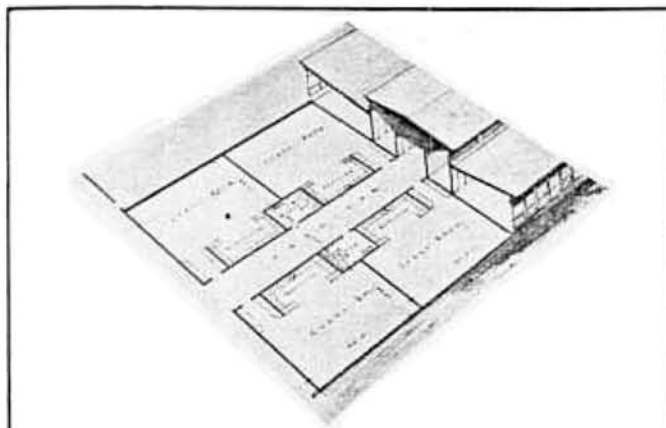
In every school of pronounced "activity" character, there are noisy areas to be isolated from the quiet zones. Here we have a zone where there will be extended use of tools and apparatus creating more or less noise, properly grouped together at the end of a wing rather than in a basement or in the center of the building. It is noteworthy that the "science yard" contains provisions for study of plant life.

Two kinds of classrooms have recently been engaging the attention of educators—the square type which is becoming widespread in the West, and the more or less free-standing type which had its widest publicity when adopted in the Crow Island School at Winnetka, Illinois. The proposed Creston School uses adaptations of both kinds. In this western end, rooms tending to specialized use are of what might be called the "Winnetka" type, while the remainder of the rooms are square and all open directly to play areas.

One of the innovations worthy of special attention is the distribution of toilet rooms in scattered positions along the entire corridor, to cut down the need for supervision.

The heating is divided into seven zones. These serve, respectively, the classrooms, offices, cafeteria, auditorium, gymnasium, nursery and kindergarten, and community facilities sections. The community-facilities zone and the classroom zone are served by a split system utilizing wall-hung copper convectors for direct heating and a central fan for mechanical ventilation. The auditorium, gymnasium, and cafeteria are heated by individual blast units designed for continuous fan operation. The office has wall-hung copper convectors and the nursery and kindergarten have warm-water panels in the floors.





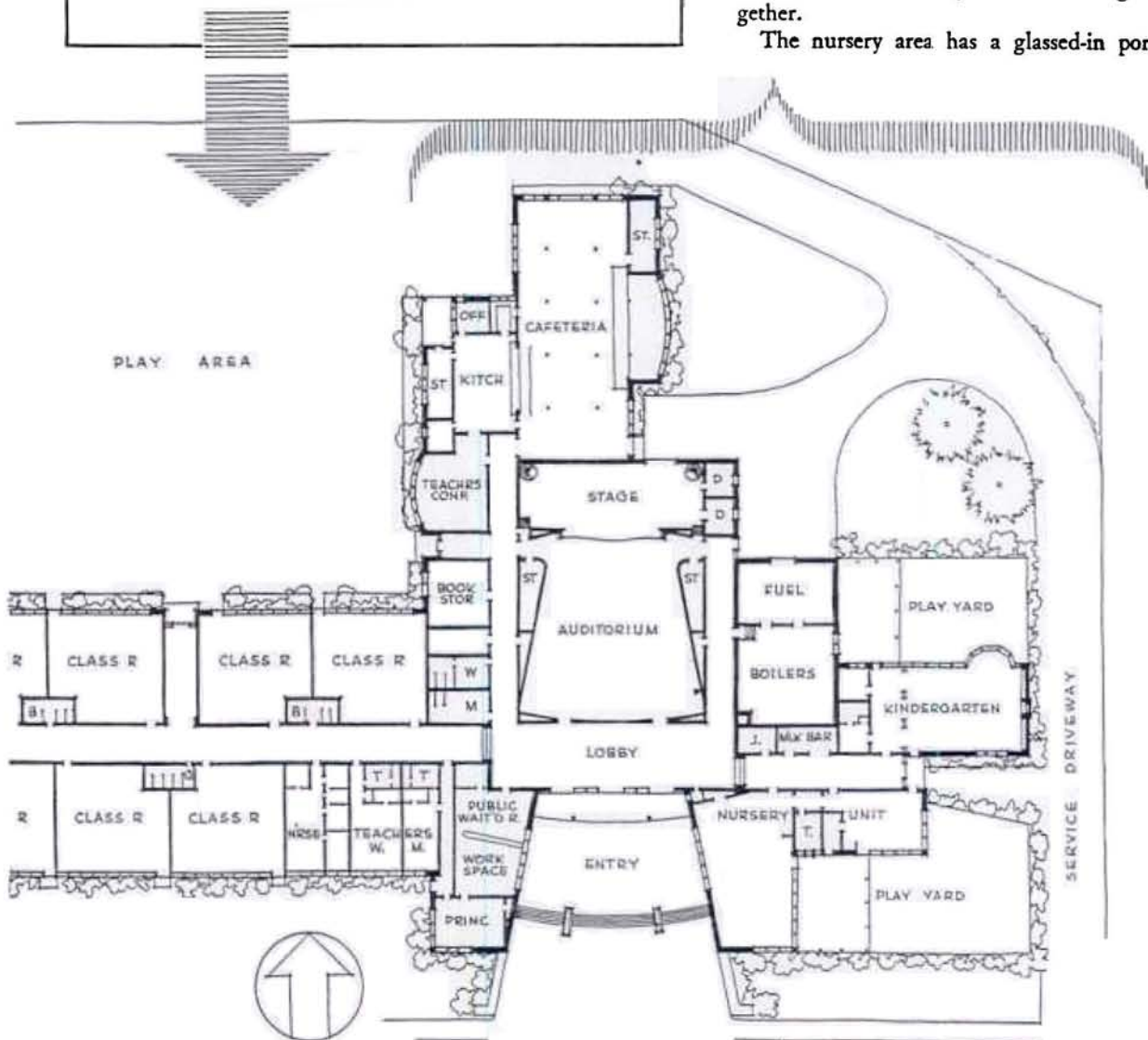
The structural system proposed for the Creston School is distinctly novel. The middle portion is raised up as shown in the section, to form a clerestory which daylights not only the corridor but the innermost part of the classrooms. Glass block are found in the clerestory and again in the upper part of the corridor wall directly opposite.

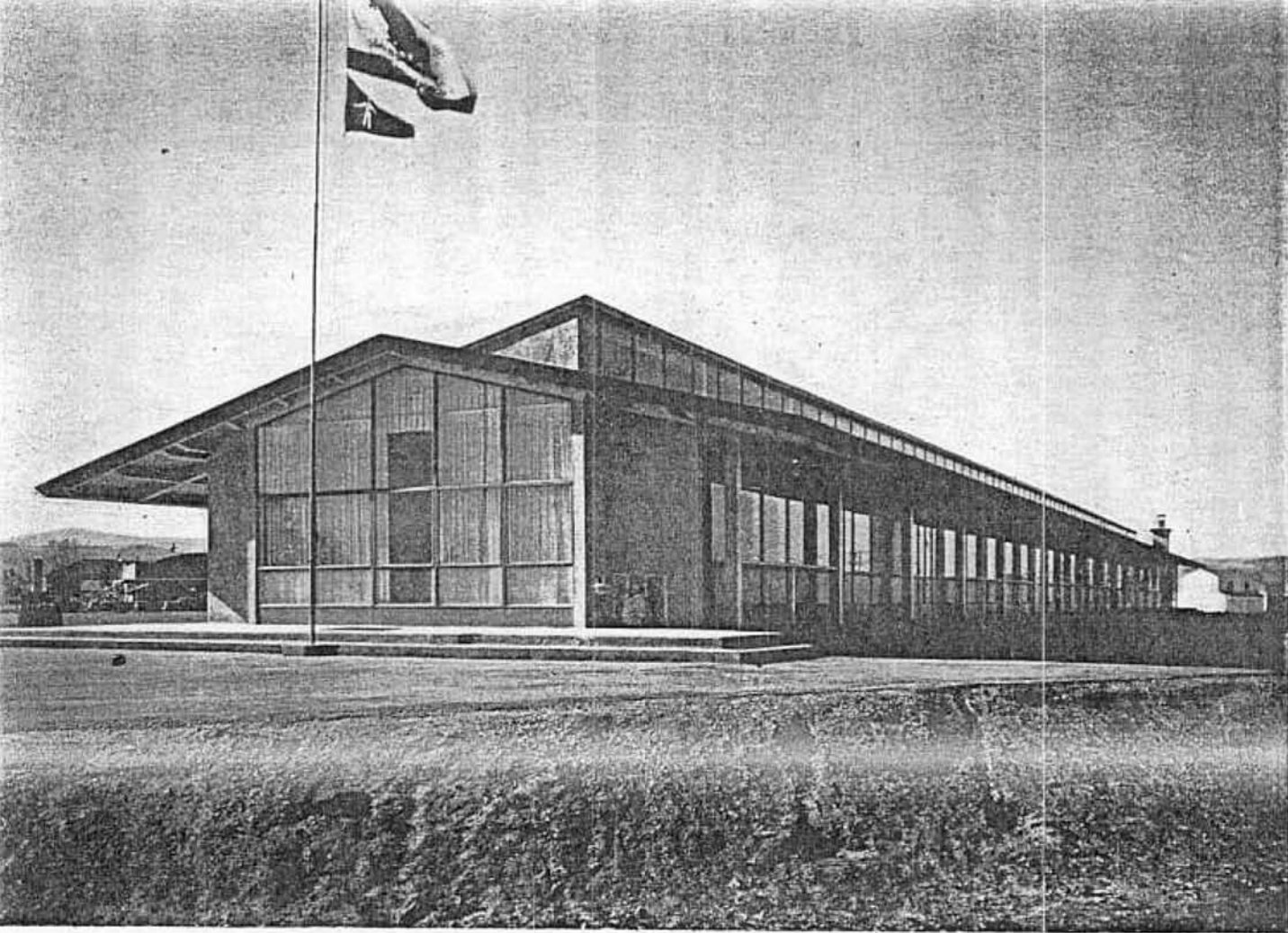
This arrangement permits the inner part of the classroom to be used as an activity area. The artificial illumination is closely integrated, and will be the subject of a later study.

THE community or neighborhood provisions in this plan are far from negligible, including as they do a full-fledged theater and big cafeteria capable of serving big evening functions as well as school purposes. Note the provision of a bandstand in the latter room, making it available for dances and entertainments.

Two little features in this community wing deserve special mention: one is the teachers' conference room, whose importance is stressed by Dr. Melby. The other is a book storage room—a highly essential school facility too often forgotten altogether.

The nursery area has a glassed-in porch.





WEST

CHILD-SCALED SCHOOL IN A FRESH MODEL

Shoreview School, San Mateo, California

By Ernest J. Kump & Mark Falk

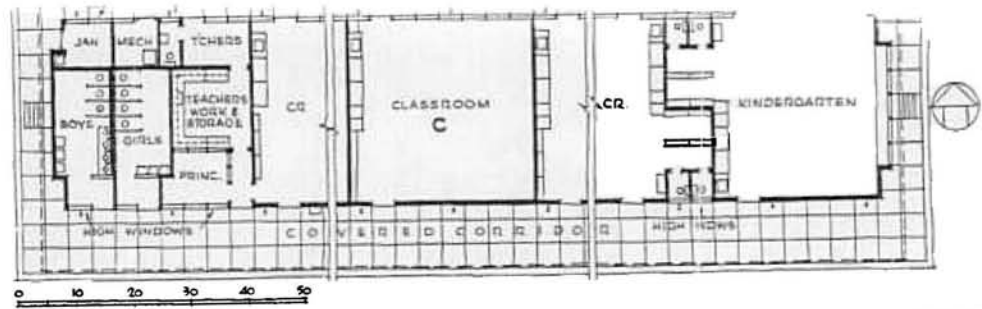
AGAIN this architect has given a vivid expression to the idea of a school as a pleasant place for children.

Like the Laurel School by the same architect (RECORD, Jan., 1948) and the Barstow School (March, 1948), it is toplighted; but instead of a skylight, which might involve maintenance factors, there is a high clerestory. This has been managed with a minimum disturbance to the quiet sheltering roof lines; and the low eaves height brings the

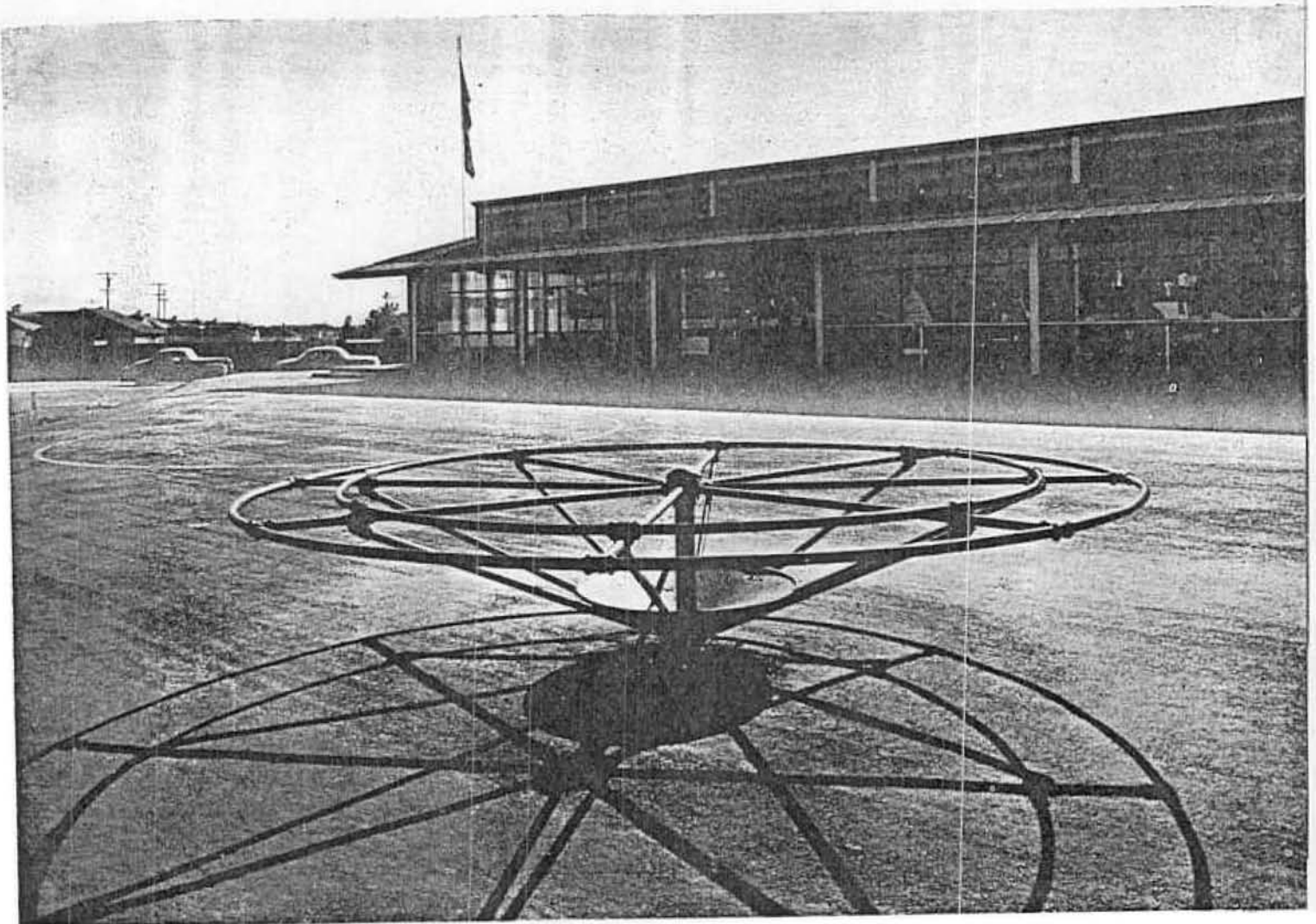
school into nice scale with the surrounding bungalow-type houses (photograph, page 301). (A low eaves height has been found, incidentally, to be a prime factor in holding down school building costs—see page 291.)

On the south side, windows have been eliminated altogether (photograph, opposite page).

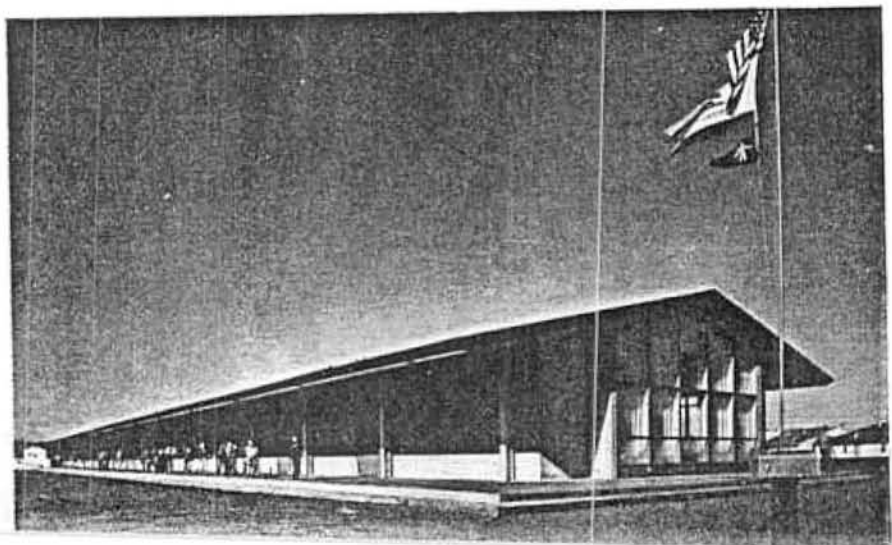
Exterior walls are stucco; roof shows wood and steel, with stainless steel fascia. Olive-green doors set off stone-gray walls, terra cotta red trim.

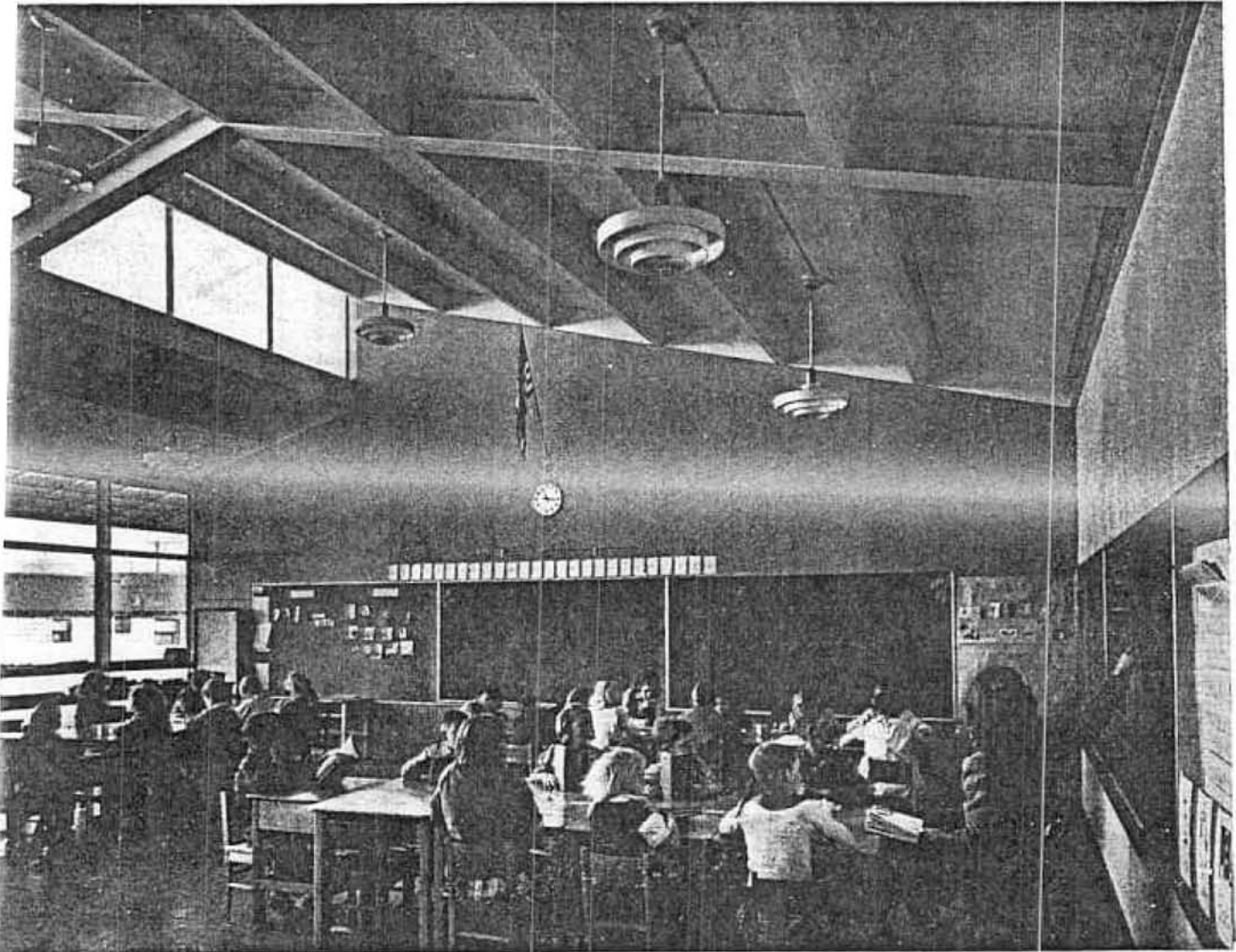


Telescoped plan. Between "A" and "B" there are five classrooms similar to "C"



Roger Sturtevant Photos

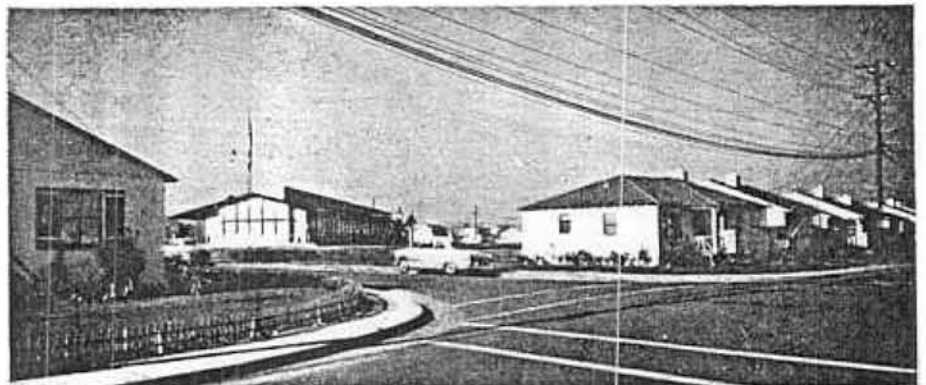
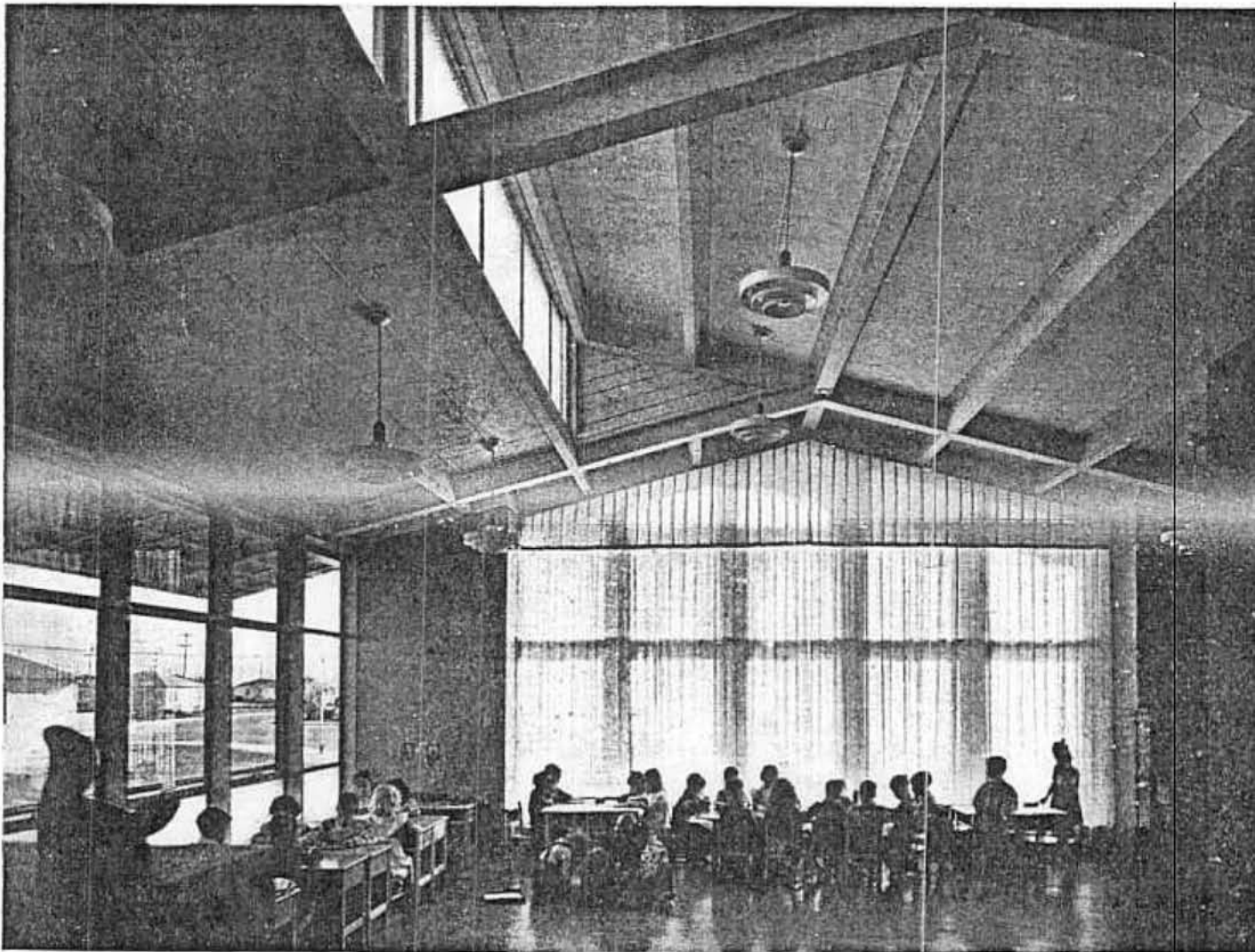


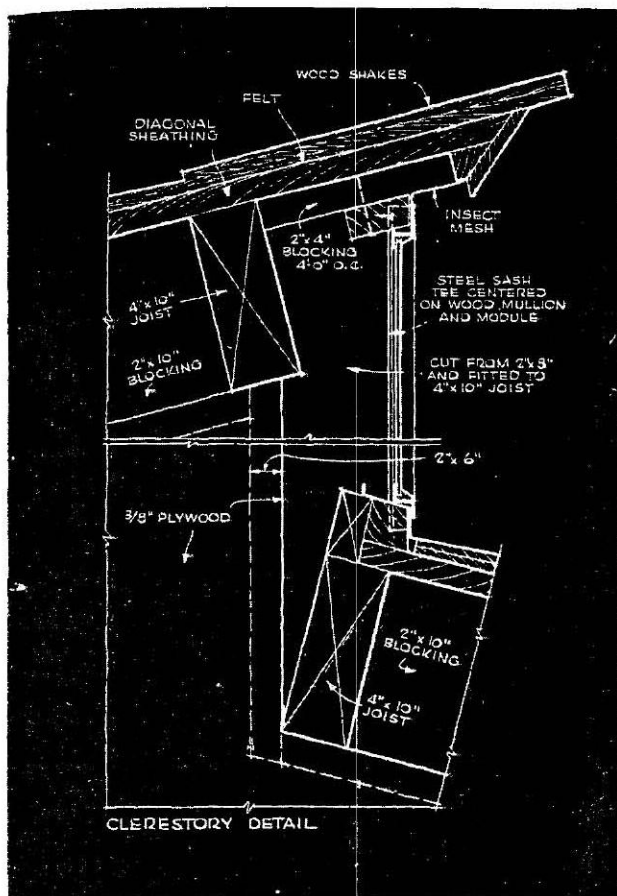


The very excellence of Mr. Sturtevant's photography in conveying how the interior is put together has one disadvantage. The lens subtends a wider angle than the main field of view of the child's eye; the ceiling and the clerestory light are far less prominent in the child's normal way of looking. Because the "top light" is well above the 60° central cone of vision of seated children

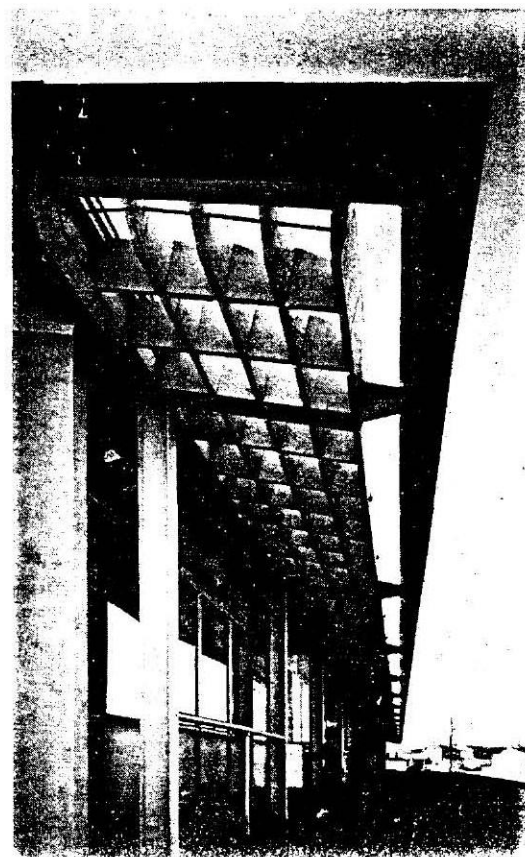
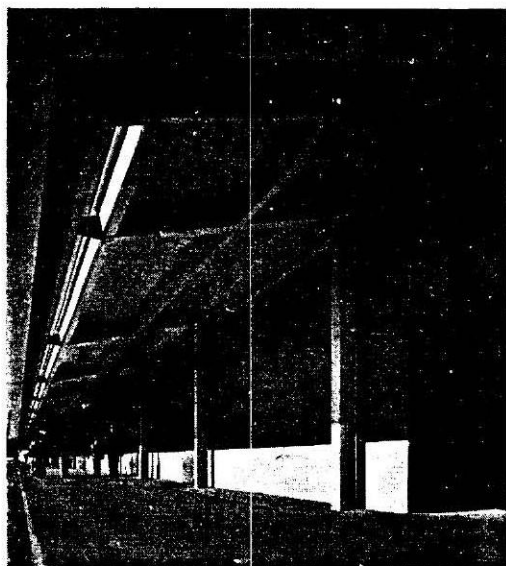
looking straight across the room, the architect has omitted any baffles to screen off the glare of the sky. Such baffles, he contends, add initial cost and maintenance; and he prefers to use the restraining effect of tempered obscure glass up above. In other schools of the same model, now under construction, there has been restored a set of south transom windows.

Opposite page, typical classroom; this page, kindergarten, both looking east. Interior walls are plywood, floor asphalt tile, ceiling acoustic tile. The soft effect of the fireproof curtain suggests that more use might be made in the U.S. of drapes and awnings, as is done in Switzerland and Scandinavian countries. The glare of white houses seen through windows is to be screened by planting





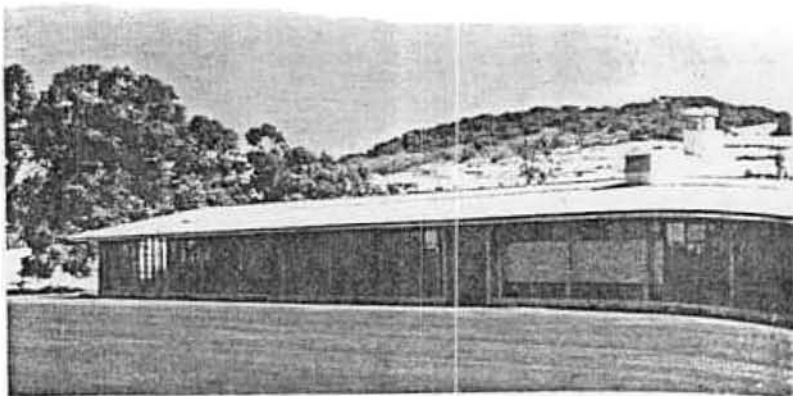
Roger Sturtevant Photos



LAUREL ELEMENTARY SCHOOL

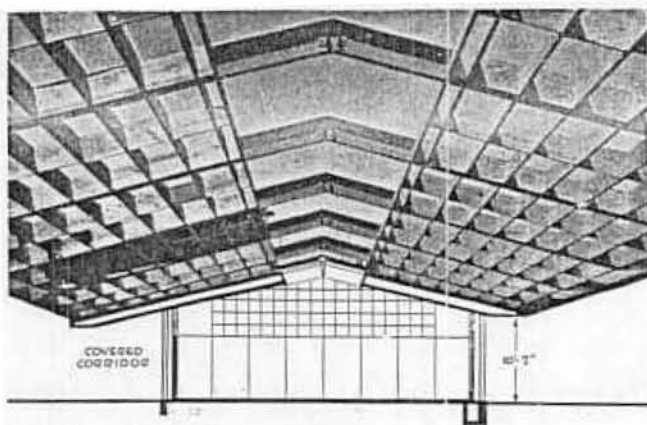
San Mateo, California

Franklin, Kump & Falk, Architect-Engineers



A NEW SCHOOL CYCLE GRACEFULLY BEGUN

BY a happy conjunction, this new school can be presented with the opening of the new year. It begins a new technical cycle on the West Coast, the cycle of *top lighting*, or, as Mr. Kump calls it, "trilateral" lighting of classrooms. Few of these new schools have the finished character, the accomplished architecture, of this initial essay by the Kump firm. The combined drawing and photograph (right) shows the essential structural system. (Working details, including the skylight, appeared in the *RECORD* just a year ago.) But the deeper meaning of the school lies in the fine child scale, the happier environment for children.



Plan provides for an eight-grade program, using duplicate rooms. Through-passage does not interrupt roofs (see section, page 407)

